



**PATENT
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: RALLIS, John H.)
Serial No.: 10/624,820) Examiner: Adams, Gregory W.
Filed: 07/21/2003)) Art Group Unit: 3652
For: AUTOMATED WAREHOUSING AND)) Docket No. P3179
CARGO LOADING SYSTEM))

RESPONSE

Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is in Response to the Office Action dated 11 March 2005. A response was due 11 June 2005. A two month extension is hereby requested making the response due on 11 August 2005. A check in the amount of \$225.00 is enclosed in payment of the extension fee. It is believed that no other fee is presently due to maintain this application in full force and effect, but if any such fee is due, please charge this to Deposit Account No. 08-1254.

AMENDMENT

1. (original) A warehousing system for palletized cargo, said system comprising:
 - a feed conveyer for bringing palletized cargo to or from said system;
 - a plurality of storage racks for storing said palletized cargo;
 - a loading/unloading conveyer for bringing said palletized cargo from or to at least one loading/unloading dock;

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a traveling conveyer for carrying individual loads of said palletized cargo;
and

means for selectively moving said traveling conveyer between:

(i) a location in which said traveling conveyer is aligned with said feed conveyer for receiving or discharging said palletized cargo to or from said feed conveyor;

(ii) locations in which said traveling conveyor is aligned with said storage racks for receiving or discharging said palletized cargo from or to said storage racks; and

(iii) a location in which said traveling conveyor is aligned with said loading/unloading conveyor for receiving or discharging said palletized cargo from or to said loading/unloading conveyor.

2. (original) The warehousing system of claim 1, wherein said storage racks are stacked in tiers at a plurality of elevations.

3. (original) The warehousing system of claim 2, wherein said traveling conveyor comprises:

a conveyor deck for holding loads of said palletized cargo; and

means for elevating said conveyor deck to heights level with said storage racks in said stacked tiers.

4. (original) The warehousing system of claim 3, wherein said means for elevating said conveyor deck comprises:

a scissor-jack mechanism mounted to said conveyor deck for selectively raising and lowering said conveyor deck to said heights level with said storage racks.

5. (original) The warehousing system of claim 3, wherein said means for selectively moving said traveling conveyor comprises:

a wheeled chassis having said conveyor deck mounted thereon; and at least one track for guiding said wheeled chassis between said locations in which said palletized cargo is received or discharged.

6. (original) The warehousing system of claim 1, wherein said feed conveyor further comprises:

a branch portion that diverges from a main portion of said feed conveyor, for bringing said cargo directly to or from said loading/unloading conveyor without passing to said traveling conveyor.

7. (original) The warehousing system of claim 6, wherein said feed conveyor further comprises:

means for selectively diverting said palletized cargo from said main portion of said feed conveyor onto said branch portion of said conveyor.

8. (original) The warehousing system of claim 7, wherein said means for selectively diverting said palletized cargo onto said branch portion of said feed conveyor comprises:

a sweep arm pivotally mounted proximate a junction of said main and branch portions of said feed conveyor; and

means for selectively extending said sweep arm from a retracted position in which said palletized cargo is permitted to pass along said main portion to said traveling conveyor, to an extended position in which said sweep arm redirects said cargo along said branch portion of said feed conveyor.

9. (original) The warehousing system of claim 6, wherein said branch portion of said feed conveyor comprises:

a bypass segment connecting said branch portion of said feed conveyor and said loading/unloading conveyor; and

means for displacing said bypass segment so as to form a gap between said branch portion of said feed conveyor and said loading/unloading conveyor, for receiving said traveling conveyor therein when said traveling conveyor is in said location for receiving or discharging said palletized cargo from or to said loading/unloading conveyor.

10. (original) The warehousing system of claim 1, wherein said at least one loading/unloading dock is an automated cargo loading/unloading system comprising:

a rigid, extensible dock member having an upper surface for supporting a load of palletized cargo;

means for extending said dock member into an interior of a transport vehicle so as to carry said load of palletized cargo into or out of said transport vehicle en masse; and

means for selectively restraining said load of palletized cargo within said interior of said vehicle as said extensible dock member is withdrawn therefrom.

11. (original) The warehousing system of claim 10, wherein said extensible dock member comprises:

a beveled leading edge for sliding under a load of palletized cargo within said interior of said transport vehicle as said dock member is extended therein.

12. (original) The warehousing system of claim 10, wherein said automated cargo loading/unloading system further comprises:

means for selectively transferring said palletized cargo from said loading/unloading conveyor to said extensible dock member.

13. (original) The warehousing system of claim 12, wherein said means for selectively transferring said palletized cargo from said loading/unloading conveyor to said extensible dock member comprises:

a push plate positioned proximate an inner end of said extensible dock member and on an opposite side of said loading/unloading conveyor therefrom; and

means for selectively extending said push plate so as to push said palletized cargo off of said loading/unloading conveyor and onto said inner end of said extensible dock member.

14. (original) The warehousing system of claim 10, wherein said automated cargo loading/unloading system further comprises:

means for selectively transferring said palletized cargo from said extensible dock member to said loading/unloading conveyor.

15. (original) The warehousing system of claim 14, wherein said means for selectively transferring said palletized cargo from said extensible deck member to said loading/unloading conveyor comprises:

an unloading paddle mounted to said extensible dock member;

means for selectively moving said unloading paddle from a retracted position in which said unloading paddle is positioned beneath an upper surface of said extensible dock member, to a deployed position in which said unloading paddle projects above said upper surface of said extensible dock member proximate an outer end of said dock member; and

means for translating said unloading paddle in said deployed position from said outer end of said extensible dock member to proximate an inner end of said deck member, so as to push said palletized cargo off of said extensible dock member and onto said loading/unloading conveyor at said inner end of said dock member.

16. (original) An automated cargo loading/unloading system, comprising:

a rigid, extensible dock member having an upper surface for supporting a load of palletized cargo;

means for extending said dock member into an interior of a transport vehicle so as to carry said load of palletized cargo into or out of said transport vehicle en masse; and

means for selectively restraining said load of palletized cargo within said interior of said vehicle as said extensible dock member is withdrawn therefrom.

17. (original) The automated cargo loading/unloading system of claim 16, wherein said extensible dock member comprises:

a beveled leading edge for sliding under a load of palletized cargo within said interior of said transport vehicle as said dock member is extended therein.

18. (currently amended) The automated cargo loading/unloading system of claim 16, further comprising:

means for selectively transferring said palletized cargo from [[said]] a loading/unloading conveyor to said extensible dock member.

19. (original) The automated cargo loading/unloading system of claim 18, wherein said means for selectively transferring palletized cargo from said loading/unloading conveyor comprises:

a push plate positioned proximate an inner end of said extensible dock member and on an opposite side of said loading/unloading conveyor therefrom; and

means for selectively extending said push plate so as to push said palletized cargo off of said loading/unloading conveyor and onto said inner end of said extensible dock member.

20. (original) The automated cargo loading/unloading system of claim 16, further comprising:

means for selectively transferring said palletized cargo from said extensible dock member to said loading/unloading conveyor.

21. (original) The automated cargo loading/unloading system of claim 19, wherein said means for selectively transferring said palletized cargo from said extensible dock member to said loading/unloading conveyor comprises:
an unloading paddle mounted to said extensible dock member;

means for selectively moving said unloading paddle from a retracted position in which said unloading paddle is positioned beneath an upper surface of said extensible dock member, to a deployed position in which said unloading paddle projects above said upper surface of said extensible dock member proximate an outer end of said dock member; and

means for translating said unloading paddle in said deployed position from said outer end of said extensible dock member to proximate an inner end of said deck member, so as to push said palletized cargo off of said extensible dock member and onto said loading/unloading conveyor at said inner end of said dock member.

22. (original) The automated cargo loading/unloading system of claim 17, wherein said extensible dock member comprises:

a thin, rigid plate member.

23. (original) The automated cargo loading/unloading system of claim 21, wherein said means for extending said dock member comprises:

drive means mounted to an inner end of said rigid plate member for translating said plate member into and out of said interior of a transport vehicle.

24. (original) The automated cargo loading/unloading system of claim 22, wherein said extensible dock member further comprises:

a plurality of rollers mounted to said rigid plate member and protruding slightly above an upper surface thereof for enabling said palletized cargo to move longitudinally along said plate member.